

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Office Action of July 21, 2003.

It is noted that the requirement for election of species has been withdrawn.

The Abstract has been replaced with a shorter new Abstract.

Claim 1 has been amended to incorporate the features of original Claims 2 and 3. Claim 4 has been amended to incorporate the features of original Claims 7 and 8. No new matter is presented. Basis for the amendments is found, *inter alia*, on page 20, line 16 and page 21, line 20.

The claims in the application are:

1, 4-6, 9, 10 and 13-15.

The rejection of Claims 1, 9 and 10 under 35 U.S.C. § 102(b) in view of *Eda, et al.* (US 5,482,127) is traversed and reconsideration is respectfully requested. The Office Action points to element 232 in Figure 3 of the reference for the disclosure of an elastic member. However, the element 232 appears to be placed within the first transmission member 231.

In contrast, in Figure 1 of the present invention, the elastic body 83 is clearly shown as being located between the first transmission member 81 and the second transmission member 82.

The rejected claims have been amended to specify that the transmission member and the elastic body are cylindrical. Further, the claims point out the flat faces formed at the outer periphery of the first transmission member and at the inner periphery of the second transmission member.

Applicants respectfully submit that this cited reference fails to describe the invention as presently claimed within the meaning of 35 U.S.C. § 102(b); i.e. that elastic member is disposed between two transmission members. Furthermore, this cited reference fails to describe that flat faces are formed between the two transmission members in a manner to be in opposed relation with each other.

As can be seen in Figure 2, the cylindrical elastic body 83 of the present invention is interposed between a cylindrical first transmission member 81 having flat faces 81a formed at an outer periphery and a cylindrical second transmission member 82 having flat faces 82a formed at an inner periphery so as to oppose the flat faces 81a. Further, in the present invention, the flat faces 81a, 82a restrain the transmission members 81, 82 from rotating relative to each other through a given angle or more.

As a result, in the present invention, by the above-mentioned restraining construction for relative rotation by means of the flat faces 81a, 82a, the rotation of the electric motor can be easily and securely transmitted to the rotating shaft via the elastic body. Moreover, the structure of the joint may be even more simplified. Where the rotating shaft is subjected to an excessive load, the flat faces of the transmission members receive the load thereby to protect the elastic body from the excessive load. Thus, the elastic body is prevented from being fractured or damaged by the excessive load, so that the joint is increased in durability and reliability. See the original specification, page 7, lines 5-22, for example. For the above reasons, the rejection of Claims 1, 9 and 10 under 35 U.S.C. § 102(b) should be withdrawn.

The rejection of Claims 4, 5 and 6 under 35 U.S.C. § 102(b) in view of *Birkigt* (US 2,586,293) is traversed and reconsideration is respectfully requested.

Applicants respectfully submit that *Birkigt* fails to describe the subject matter of the rejected claims. Specifically, there is no description in *Birkigt* of the flat faces formed between the two transmission members in a manner to be in opposed relation with each other. Therefore, the rejection is deemed improper and should be withdrawn.

The rejection of Claims 13 to 15 under 35 U.S.C. § 103(a) in view of *Birkigt* taken with *Eda, et al.* (US 5,482,127), is traversed and reconsideration is respectfully requested. As admitted in the Office Action, *Birkigt* fails to disclose the elastic joint in combination with a steering assist system as claimed herein. The Office Action relies on *Eda* and alleges it would have been obvious to use an elastic joint of *Birkigt* in the steering assist system of *Eda*. Yet no reason, suggestion or motivation has been pointed out that would lead a person skilled in the art to this combination as presently defined.

To establish a *prima facie* obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916837 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

A statement that the modifications of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* obviousness without

some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ 2d, 1300 (Bd. Pat. App. & Int. 1993).

Furthermore, all cited references in the Office Action fail to disclose the aforementioned restraining construction using the flat faces 81a, 82a of the present invention. Accordingly, even if all cited references are combined, a person skilled in the art would not have been lead to the subject matter of the amended claims of the present invention.

Applicants note the comment in the Office Action, page 3, lines 3 and 4, that a flat face on an outer periphery of the first transmission member is in opposed relationship to a flat face on inner periphery of the second transmission member. It should be noted that applicants' flat faces 81a, 82a are not merely the respective conventional periphery parts. Instead, the flat faces 81a are formed by cutting the outer diameter surface (circumferential surface) of the cylindrical first transmission member 81, and flat faces 82a are formed by cutting the inner diameter surface (circumferential surface) of the cylindrical second transmission member 82. Thus, the flat faces as defined by applicants' claims are distinctly different from any structure shown in the cited prior art.

All other rejections are moot in view of the deletion of the rejected claims.

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Therefore, favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

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ABSTRACT

B² A steering assist system which transmits the rotation of an electric motor to a steering shaft via a worm shaft and a worm wheel meshed with a worm of the worm shaft, where an output shaft of the electric motor and the worm shaft are interconnected via a joint. The joint includes a cylindrical first transmission member mounted on the output shaft, a cylindrical second transmission member to which the worm shaft is mounted, and a cylindrical elastic body interposed between the first and second transmission members. The joint may further include a torque limiter including a spring which is interposed between an end surface of the second transmission member and a spring seat formed at an end surface of a third transmission member in opposed relation with the end surface of the second transmission member for inhibiting relative rotation between the second and third transmission members.
